137-58-6-11291

Test of a Centrifugal Laboratory Mill

The optimum output is 600 kg/hr. Tests show this output to be 52 times as great as that of an analogous ball mill and 3.5 times as great as that of a vibratory crusher fed with 3-0 mm Krivoy Rog ore. Power consumption is less by 29-47% and 69-77%, respectively. The use of grinding cylinders instead of balls increases grinding intensity by 50% while raising power consumption by 36%.

I.M.

1. Crushers--Design 2. Crushers--Performance 3. Ball mills--Design
4. Ores--Processing

Card 2/2

RUNDKVIST, A.K.; SAVICHEVA, Ye.S.

Prospects for the use of ore crushing machines without balls.
Obog. rud 5 no.3:11-17 '60. (MIRA 14:8)
(Crushing machinery)

SAVICHEVA, Ye.S.; RUNDKVIST, A.K.

Mill operation at supercritical speeds (review of R.T.Khukki's research). Obog.rud 5 no.4:21-23 '60. (MIRA 14:8)
(Crushing machinery)

SEREDAVIN, D.G.; KONNOV, F.Ya.; YUSHKEVICH, G.I.; SILINA, L.D.; MOISEYEVA, Ye.I.; BLAGODAROVA, T.N.; BIRYUKOVA, M.S.; SOLOVEY, I.I.; REVIZOVA, V.Ye.; YEVPRYNTSEVA, Z.A.; DAVYDOVA, I.V.; SAVICHEVA, Z.N.; KHAUSTOVA, A.K., tekhn.red.

[Economy of Kuybyshev Province for 1958-1959; statistical collection] Narodnoe khoziaistvo Kuibyshevskoi oblasti za 1958-1959 gody; statisticheskii sbornik. Kuibyshev, 1960. 174 p. (MIRA 14:1)

1. Kuybyshevskaya oblast'. Statisticheskoye upravleniye. 2. Nachal'nik Statisticheskogo upravleniya Kuybyshevskoy oblasti (for Seredavin). 3. Statisticheskoye upravleniye Kuybyshevskoy oblasti (for all, except Khaustova).

(Kuybyshev Province--Statistics)

SAVICHEVSKAYA, L.I. (Sverdlovsk); VEDENINA, O.M. (Sverdlovsk); LUKANIN, V.P., professor, zaveduyushchiy.

Atresia of the aortic isthmus. Klin.med. 31 no.7:73-75 Jl '53. (MLRA 6:9)

1. Propedevticheskaya terapevticheskaya klinika Oblastnoy klinicheskoy bol'nitsy (for Lukanin). 2. Patologoanatomicheskoye otdeleniye Oblastnoy klinicheskoy bol'nitsy. (Aorta--Abnormities and deformities)

SAVICKAS, J.

Some conclusions from the investigations of the fresh-water calcareous sediments in eastern Lighuania.

p. 233 (Mokslinial Pranesimai) Vol. 4, 1957, Vilnius, Lithuania

SO: MONTHLY INDEX OF EAST EUROPEAN ACCESSIONS (EEAI) LC, VOL. 7, NO. 1, JAN. 1958

SAVICKY, B.

"People's Committees Help Transportation", P. 9, (TECHNICKE NOVINY, Vol. 2, No. 10, May 1954, Praha, Czechoslovakia)

SO: Monthly List of East European Accessions, (EEAL), LC, Vol. 3, No. 12, Dec. 1954, Uncl.

SAVICZ,V.P.

Lichens within Russia (Lichenotheca Rossica) [in Latin]; Decas VII (1954). Bot.mat.Otd.spor.rast. 10:1-5 Ja '55. (Lichens) (MLRA 8:7)

SAVICZ, V.P.

Lichens of Russia [in Latin]; Decade VIII (1956). Bot.mat.Otd. Spor.rast. 11:1-4 Ja '56. (MLRA 9:11)
(Lichens)

DRUCKER, A.; FUHRMANN, Coloman, ing.; GOMOIU, Alex.; CALUGAREANU, Ad. ing; SAVIDIS, C., ing.; TELEA, Gh.; BORCEA, N.; JOGAREANU, O.; RIZEA, Nicolae; DUMITRESCU, Gheorghe.

Present problems of labor output rates. Probleme econ 17 no.5: 157-160 My '64.

1. Director, "Victoria"-Calan Plant (for Drucker). 2. Head of the Department of Labor Organization, "Victoria"-Calan Plant(for Fuhrmann). 3. Director, "Steaua Rosie" Plant, Bucharest (for Gomoiu). 4. Head of the Department of Production Organization, "Steaua Rosie" Plant, Bucharest (for Calugareanu). 5. Director, Medgidia Cement Works (for Savidis). 6. Head of the Department of Labor Organization, Medgidia Cement Works (for Telea). 7. Director, Enterprise of Electricity, Sibiu (for Borcea). 8. Head of the Department of Labor Organization, Enterprise of Electricity, Sibiu (for Jogareanu). 9. Director, "Carmen" State Industrial Enterprise, Bucharest (for Rizea). 10. Head of the Department of O.N.M., "Carmen" State Industrial Enterprise Bucharest (for Dumitrescu).

GALIMOV, M.D.; BABADZHAN, A.A.; BERENNOV, S.V.; TIMOSHIN, D.Ya.; SAVIK, A.Ya.

Converter dust screen with water cooling. Biul. TSIIN tsvet. met. no.4:31-32 '58. (MIRA 11:5)
(Converters) (Dust collectors--Cooling)

SAVIDOV, M.A.; MERKULOV, Ye.A.

Method of preparing cast gating system parts in graphite molds.
Lit. proizv. no.10:41 O '60. (MIRA 13:10)
(Founding)

SAVII, Gh.; NANU, A.; GHEORGHIU, St.; POPOVICI, I.

Studies regarding the influence of the structure of R I8 quick splintering steel tools on anode and mechanical sharpening with the 4352 machine. Studii tehn Timisoara 9 no.3/4:309-323 Jl-D '62.

ABRAMOVICI, R.; SAVII, D.; FILIPESCU, E.

Characteristics and comportment in exploiting some grog refractory materials obtained by a single combustion. Studii chim Timisoara 9 no.3/4:336-341 Jl-D '62.

NANU, A.; SAVII, Gh.; GHEORGHIU, St.; POPOVICI, I.

Determining the optimum method of anodic and mechanical electroerosive sharpening of the R 18 rapid steel splintering devices, thermally treated on the 4352-type machine. Studii tehn Timisoara 10 no.2: 401-419 J1-D '63.

SAVII, Gh.; ROSINGER, St.; MICSA, I.

Comparative data on the necessary power for polishing reduced hardness steel for the cases of the cooling liquid flowing from outside and through the abrasive tool pores. Bul It si Tehn Tim 9 no.1:129-134 Ja-Je '64.

SAVII, Gh.; TRUSCULESCU, M.; BAGIU, L.; TACHE, Gh.; TIRZIU, V.

Study of the connection between the surface state and the wear in the case of sliding friction. Bul St si Tehn Tim 9 no.2:453-461 Jl-D '64.

L 2359-66 EWT(1)/EWT(m)/EWP(t)/EWP(b) IJP(c) JD

ACCESSION NR: AT5021780 UR/2613/64/000/028/0121/0127

AUTHORS: Yaek, I. V.; Meriloo, I. A.; Savikhin, F. A.

TITLE: Zinc sulfide phosphor with deep traps

SOURCE: AN EstSSR. Institut fiziki i astronomii. Trudy, no. 28, 1964. Issledovaniya po lyuminestsentsii (Research on luminescence), 121-127

TOPIC TAGS: zinc sulfide, phosphor, emission spectrum, thermoluminescence/ DVS 25 lamp, SF 4 monochromator, SPM 1 monochromator, FEU 18 photomultiplier

ABSTRACT: In order to investigate the deep trap thermoluminescence of zinc sulfide phosphors the authors synthesized ZnS-Bi specimens by mixing luminophosphor zinc-sulfide with 3% $BiCl_3$ activator and 4% LiCl melt. The mixture was annealed for 20 min at 1150C in air and rapidly cooled. The emission and excitation spectra were measured by using two monochromators, and a hydrogen lamp was used for excitation. The thermoluminescence curves showed two temperature peaks at T = 570K and T = 460K. The specimen also showed a single maximum red band at a wavelength of 610 nm. The high temperature thermoluminescence peaks are connected with thermal quenching phenomena as shown in Fig. 1 on the Enclosure. The last intensity drop on these curves occurs around 550K. It is shown that this rather unusual shift to high

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L 2359-66

ACCESSION NR: AT5021780

6

temperature in ZnS thermal quench properties reveals the existence of deep traps in the material. The authors thank Ch. B. Lushchik for his guidance in this work. Orig. art. has: 3 figures.

ASSOCIATION: Institut fiziki i astronomii, AN EstSSR (Institute of Physics and Astronomy, AN EstSSR)

44,55

SUBMITTED: 20Jan64 ENCL: 01 SUB CODE: IC, GC

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ENCLOSURE: 01

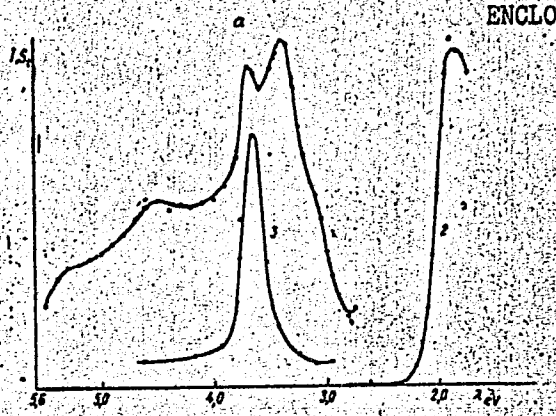

Рис. 1.а. Спектры возбуждения (1), излучения (2) и возбуждения термолюминесценции для пика с T_m = 570° K (3) фосфора ZnS-Bi.

Fig. 1a Spectra of excitation, (1) emission, (2) and excitation of thermoluminescence for a peak with T_m = 570°K, (3) for phosphorous ZnS-Bi

3/3

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D207/D303

9.4175 (1114, 1163, 1482)

AUTHORS: Rebane, K.-S. K., and Savikhin, F. A.

TITLE: Optical quenching and stimulation in some ZnS phosphors

SOURCE: Akademiya nauk Estonskoy SSR. Institut fiziki i astronomii. Trudy. No. 14, 1961. Issledovaniya po lyuminestsentsii, 276-280

TEXT: The authors report measurements of quenching and flash emission produced by additional infrared illumination during excitation of ZnS phosphors with light from a ПРК-4 (PRK-4) lamp, passed through a УФС-2 (UFS-2) filter. The following phosphors were investigated: ZnS:Zn, ZnS:Ag, ZnS:Cu (10^{-6} g/g), ZnS:Cu (10^{-5} g/g), ZnS:Cu, Al. They were prepared by heating ZnS, an activator and flux in open quartz test-tubes for 30 min at 1100°C. Infrared illumination was provided by a 400 W incandescent lamp. All measurements were carried out at room temperature. The results are presented as the degree of quenching (quenching spectrum) or the in-

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Optical quenching and ...

tensity of flash emission (flash spectrum) plotted against the infrared wavelength. The quenching spectra of the ZnS:Zn emission and of the blue luminescence of ZnS:Cu had one band at 1000-1100 mμ, which probably consisted of two closely-spaced bands. The quenching spectrum of ZnS:Ag had one band at 800-900 mμ and a stronger one at 1200-1300 mμ. The quenching spectrum of the green luminescence of ZnS:Cu had a band at 700-800 mμ and a weaker one at 1300 mμ. ZnS:Cu, Al excited with a 50 c/s field had a quenching band at 800 mμ. The results obtained for ZnS:Cu showed that: (1) The quenching and flash spectra of the same luminescence band were not identical; (2) the flash spectrum had two bands at short wavelengths: one near the maximum of optical quenching of the green band (700-800 mμ) and the other at wavelengths shorter than those investigated by the authors; (3) a flash band (at 1350 mμ) of the green and blue luminescence of ZnS:Cu (10^{-5} g/g) occurred near the long-wavelength quenching band of the green luminescence; there was no 1350 mμ flash band when the copper content in ZnS was reduced to 10^{-6} g/g. The authors state that the observed relationships could be accoun-

Card 2/3

Optical quenching and ...

ted for by a simple energy-band model. There are 2 figures and 7 references: 3 Soviet-bloc and 4 non-Soviet-bloc. The references to the English-language publications read as follows: N. T. Melamed, J. Electromech. Soc., 97, 33 (1950); E. F. Daly, Proc. Roy. Soc., 196, 554 (1949).

SUBMITTED: January 19, 1961

4

Card 3/3

SAVIKOV, V.V.

SAVIKOV, V.V.

Intensive schedule for diesel locomotive utilization. Zhel. dor. transp. 39 no.12:68 D '57. (MIRA 11:1)

1. Dezhurnyy pomoshchnik nachal'nika operativno-raspоryaditel'nogo otdela sluzhby dvizheniya, g. Ordzhonikidze.
(Diesel locomotives)

83806

S/035/59/000/003/029/039
A001/A001

9.6150

Translation from: Referativnyy zhurnal, Astronomiya i Geodeziya, 1959, No. 3, p. 52, # 2010

AUTHOR: Savikovskiy, I. A.

TITLE: Observations of Solar Radiation in Free Atmosphere

PERIODICAL: Tr. Tsentr. aerol. observ., 1957, No. 23, pp. 100-108

TEXT: The author presents results of observations on the absorption of short-wave radiation, its variation with altitude and albedo of various underlying surfaces. The measurements were performed with air-borne Yanishevskiy's pyranometers over two ground areas near Minsk in August-October 1955. Observations were carried out mainly during cloudness sky at altitudes of 200; 1,000; 2,000; 3,000 and 4,000 m. Data from 16 flights were processed; relative error of readings was 0.1 to 1.4%. It was found that the summary radiation increases with altitude on an average by 0.032 calcm^{-2}min^{-1} per 1 km in cloudless days of summer and fall. The mean intensity value of absorbed radiation in a layer of 0.2 - 4.0 km amounts to 0.067 calcm^{-2}min^{-1} and the rate of radiation heating to

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Observations of Solar Radiation in Free Atmosphere

~ 0.04 degree hr^{-1}. The following values of albedo were obtained: albedo of coniferous forests - 13.5%; greenwood forests - 14-17%; inundated meadows - 23%; towns - 16%. It was found that albedo of coniferous forests and towns depends on Sun's declination within the range 15-40%. The course of albedo variation with altitude depends on the albedo value at the ground surface; if albedo at the ground is low, it increases with the altitude. The ascending radiation flux increases with altitude in all cases.

L. A. Biryukova

Translator's note: This is the full translation of the original Russian abstract.

SAVIKOVSKIY, I.A.

Results of meteorological observations during the solar eclipse of June 30, 1954 in White Russia. Sbor.rab.Minsk. GMO no.1:39-61 '58. (MIRA 12:3)

(Eclipses, Solar--1954)
(White Russia--Meteorology--Observations)

SAVIKOVSKIY, I.A.

Direct and scattered solar radiation in Minsk. Sbor.rab.Minsk. GMO no.2:28-47 '59. (MIRA 13:5)
(Minsk region--Solar radiation)

29713 S/169/61/000/008/025/053
A006/A101

3,5800

AUTHOR: Savikovskiy, I. A.

TITLE: The theory and errors of visibility meters with combined representatio tion of the object and the sky

PERIODICAL: Referativnyy zhurnal, Geofizika, no. 8, 1961, 33, abstract 8B239 ("Tr. N.-i. in-ta gidrometeorol. priborostr.", 1960, no. 9, 17-33)

TEXT: The author analyzes theoretical errors in measuring the meteorological visibility range S_M in daylight with the aid of visibility meters of the Main Geophysical Observatory and the polarization visibility meter of the Scientific-Research Institute of Hydro-Meteorological Instrument building. Instrumental-visual methods were also employed (from contrasts of artificial or natural objects and by the method of relative brightness, developed at the Main Geophysical Observatory in 1957). The final correlations take into account the following errors which are common for all the three methods: 1) the error of the photometric process (extinction and comparison); 2) differences between the employed and true values of the threshold of the contrast sensitivity of vision; 3) errors in the values of the true contrast of the object observed;

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The theory and errors of visibility ...

4) errors of reading; 5) taking into account the effect of non-blackness of the object (for the method of relative brightness and photometric comparison). Measuring possibilities and accuracies attained by each of the aforementioned methods are evaluated by figures $Z = S_M/L$, where L is the distance from the object observed, and Z characterizes the multiplicity of the optimum values L, contained in value S_M at a given error of measuring the latter. This means that Z is characteristic of the extrapolation possibilities of the method at a given value of L. Assuming, that when measuring S_M, a relative root-mean-square error of the order of $\pm$ 20% is permissible, the calculations performed yield the following results. In the method of extinction and photometric comparison, errors in the measurement of S_M are a linear function of the Z value. At low Z values the root-mean-square error in measuring S_M is several percent; subsequently the errors increase rapidly. For the method of extinction a 20% error is attained at $Z = 6 \div 8$, and for the method of photometric comparison at $Z = 12 \div 15$. The visibility meter of the Main Geophysical Observatory is most suitable for the extinction method, and for photometric comparison the polarization visibility meter is the most suitable instrument. In the method of relative brightness the errors in measuring S_M are not a linear function of Z. At low Z values ($Z \leq 5$) the errors are several dozen percent, but then decrease

Card 2/3

The theory and errors of visibility ...

impetuously until about 20% at Z = 10. Further the errors decrease slowly and attain a minimum of about 12% at Z = 40. Then with increasing Z, the errors in measuring S_M inorease very slowly and attain again 20 - 23% at Z = 160 - 200. For the measurement of S_M by the method of relative brightness, both the aforementioned visibility meters may be used.

V. Gavrilov

[Abstracter's note: Complete translation]

Card 3/3

32280

S/169/61/000/011/039/065
D228/D304

3,5150

AUTHOR: Savikovskiy, I.A.

TITLE: Investigating the accuracy of measuring the meteorologic range of visibility by ПИВ-7 (PIV-7) equipment

PERIODICAL: Referativnyy zhurnal, Geofizika, no. 11, 1961, 28, abstract 11B203 (Tr. N.-i. in-ta gidrometeorol. priborostr., no. 9, 1960, 34 - 46)

TEXT: The author assembled laboratory equipment for measuring the precision of the polarization visibility gage designed by L.L. Lashkevich. The measurements were accomplished by the method of comparison and by the method, proposed by V.A. Gavrilov and termed by him the method of relative brightness. In laboratory conditions the author of the article modelled different contrasts and thus simulated the conditions of ground observation at the time of different visibility ranges. Introducing the concept of the relative range of visibility Z (the ratio of the meteorologic range of visibility to the distance for the extent of the observation), the author

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S/169/61/000/011/039/065
D228/D304

Investigating the accuracy of ...

gives the following estimate for the errors. The error in determination of the contrast comprises 5 % for the method of comparison and 1 % for the method of relative brightness (when Z = 100). The error in determining the meteorologic range of visibility by the method of comparison amounts to 12 % for $1.2 < Z < 10$; in the method of relative brightness it comprises 20 % for $10 < Z < 100$. [Abstractor's note: Complete translation].

Card 2/2

SAVIKOVSKIY, I.A.

Results of field tests of the M-53 polarizing visibility meter. (MIRA 15:5)
Trudy NIIGMP no.10:17-28 '61.
(Meteorological optics)

ACCESSION NR: AT4038810 S/2778/63/000/011/0013/0029

AUTHOR: Savikovskiy, I. A.

TITLE: Experimental investigation of the accuracy of M-53 visibility meters

SOURCE: Leningrad. Nauchno-issledovatel'skiy institut gidrometeorologicheskogo priborostroyeniya. Trudy*, no. 11, 1963, 13-29

TOPIC TAGS: meteorology, visibility, photometric comparison method, atmospheric visibility, visibility measurement, visibility meter, relative brightness, quenching method

ABSTRACT: The author notes that the basic measure of accuracy of visibility meters is the mean square error in the determination of the meteorological range of visibility. The problem of field testing of such meters is discussed and it is shown that despite the advantage of such field tests - the approximation of the actual operating conditions of the instrument - comparison with a standard and accumulation of a uniform series of observations is possible only under laboratory conditions. Different systems for the measurement of the daytime meteorological visibility range are analyzed and their shortcomings are noted. The author has proposed a special set-up for contrast reproduction, shown in Figure 1 of the Enclosure. The screen and shutter blades are colored with a uniform

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ACCESSION NR: AT4038810

white paint so that under the proper conditions of illumination, they are of uniform brightness. A set of shutters with slots of different dimensions makes it possible to obtain different standard contrast readings. By replacing the screen, the size and form of the observed object can be changed. Thanks to the presence of a lens, it is possible to test meters both with and without telescopic systems. This arrangement was incorporated in the P-141 device. The article describes experimental studies of visibility meter accuracy, conducted under laboratory and field conditions. An analysis of errors in the determination of the range of visibility is made and practical recommendations on the selection of the most rational methodology are given. Among the conclusions reached by the author are the following: The P-141 unit makes it possible to determine with sufficient accurary errors in the measurement of contrast of an object with homogeneous background and errors in the measurement of the relative range of visibility Z, caused by inaccuracy in the contrast measurement, for various visual-instrumental methods of contrast measurement and visibility range determination. Contrasts of objects with a sky background of less than 0.85 should be measured by the method of photometric comparison; those with a greater background - by the method of relative brightness. The quenching method should be used for tests in the event that the objects are not suitable for photometric evaluation. On the basis of laboratory observations, the mean square error in the measurement of contrast with the M-53X1 instrument by the photometric comparison method is 3%-4%, by the quenching method - 12% - 20%, and with the comparative brightness method falls from 7%

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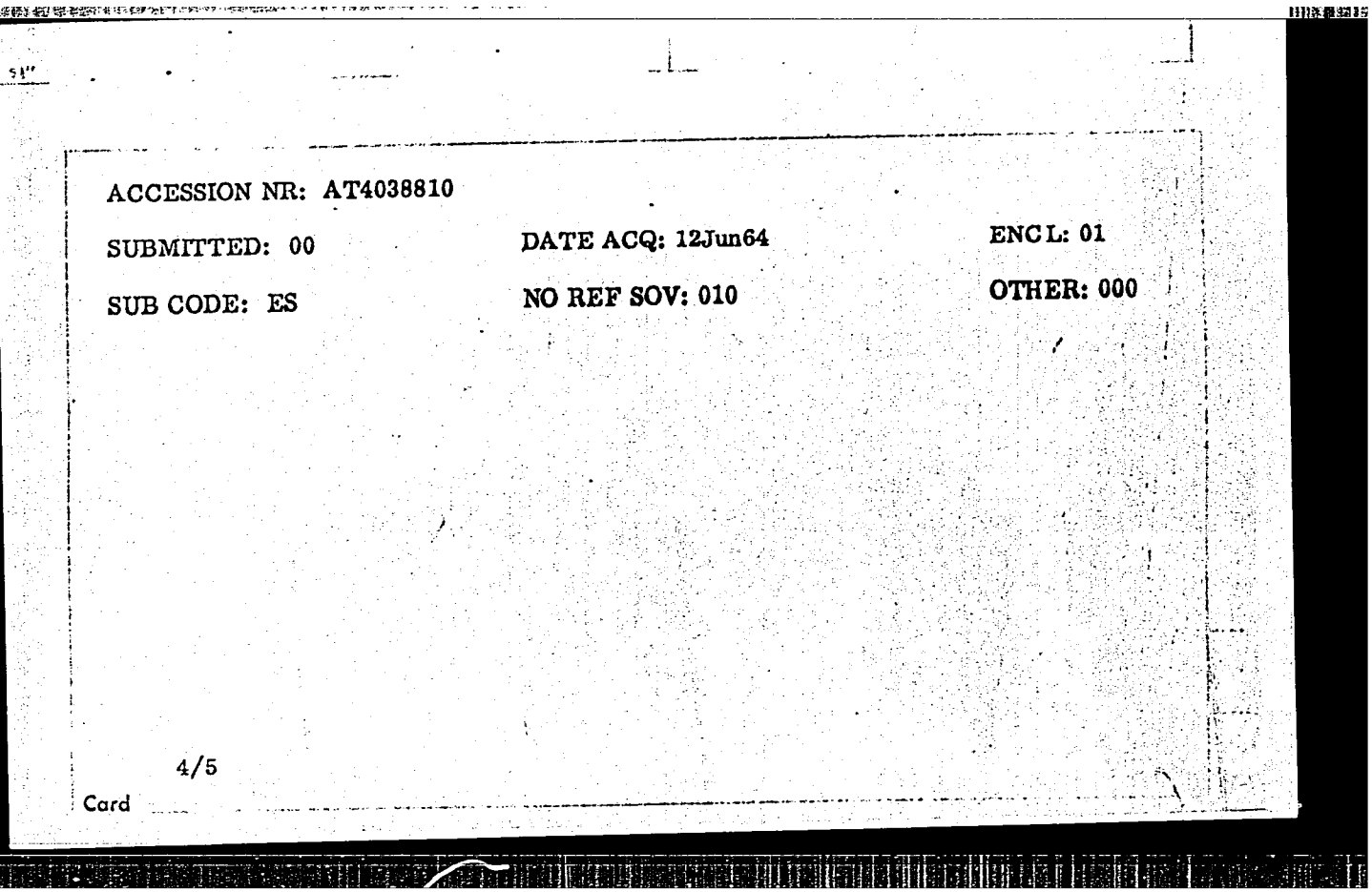
ACCESSION NR: AT4038810

when K = 0.70 to 0.5% when K = 0.97 (K = contrast). It was found, moreover, that a noticeable source of error in the measurement of the range of visibility in observations by the relative brightness method with instruments having a telescopic system is the "internal mist" of the instruments. The author found that the most accurate method is that of photometric comparison with observations over oblique black baffles. In the second place, interms of accuracy, is the method of photometric comparison using baffles and natural objects; in third place - the method of comparative brightness, and in fourth place - the method of object quenching by sky background. In this connection, it is pointed out that if suitable natural objects are present or if black baffles are available, the photometric comparison method should be used; otherwise - the relative brightness method. Of some promise, moreover, is the use of a complex method, in which observations with visibility of less than 5 km are conducted by the photometric comparison method, with those at greater visibility being carried out according to the relative brightness method. Orig. art. has: 4 tables, 5 figures and 24 formulas.

ASSOCIATION: Nauchno-issledovatel'skiy institut gidrometeorologicheskogo priborostroyeniya, Leningrad. (Scientific Research Institute of Hydrometeorological Instrument Building)



ACCESSION NR: AT4038810

SUBMITTED: 00 DATE ACQ: 12Jun64 ENCL: 01

SUB CODE: ES NO REF SOV: 010 OTHER: 000

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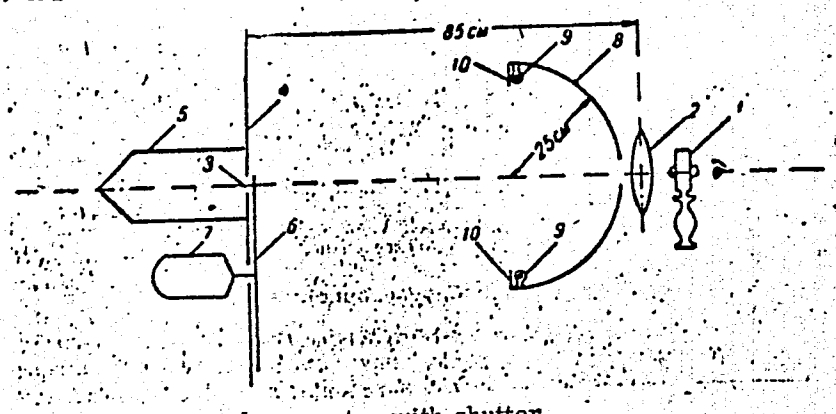

Fig. 1 - Diagram of experimental apparatus with shutter.
1 - visibility meter; 2 - collimator lens;
3 - black object aperture; 4 - white screen;
5 - darkened cavity; 6 - shutter disc;
7 - electric motor; 8 - hemisphere;
9 - light bulbs; 10 - reflector screens.

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L 60435-65 EWG(v)/EWT(1)/FCC Pe-5/Pi-4 GW

ACCESSION NR: AT5014144 UR/2778/65/000/013/0037/0046

AUTHOR: Savikovskiy, I. A.

TITLE: The influence of the polarization of light on the daylight visibility determination by means of the polarization visibility-measuring device

SOURCE: Leningrad. Nauchno-issledovatel'skiy institut gidrometeorologicheskogo priborostroyeniya. Trudy, no. 13, 1965, 37-46

TOPIC TAGS: photometric visibility determination, relative brightness determination, daylight visibility, polarimetric visibility determination, reflected light polarization, scattered light polarization

ABSTRACT: In the M-53 visibility measuring device of L. L. Dashkevich (Trudy NII GMP, no. 8, 1959; Ibid., no. 10, 1961), light from observed objects crosses a polaroid and a double-refracting prism and becomes polarized. However, this light is often partially polarized initially since it is diverted into the instrument by reflection and scattering. The present paper investigates the influence of such partial polarization on the operation of the instrument theoretically and experimentally (observations were carried out in 1960-1961 at the Minsk and Karadaga observatories). Results show that: 1) the polaroid measuring the

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ACCESSION NR: AT5014144

contrast or visibility distance should be on the side of the object, and the prism on the side of the observer; 2) the error in the contrast measurement increases with an increase in initial polarization and depends on the mutual orientation of the polarization plane and the transmission plane of the polaroid; 3) light reflected by forests during weak cloudiness is partially polarized; its polarization plane is close to that of the polarization of light by atmospheric haze, and since the intensities are approximately the same, there is partial compensation of the polarization errors; 4) the mean square error due to initial polarization is approximately 3% over dark screens, 2-7% over coniferous woods, and 20% over bright hills (under similar conditions, the relative brightness method exhibited a 9% error with a dark screen); and 5) the maximum error for the distant, inclined screen-telescopic mark comparison is 1% for the photometric approach and 20% for the brightness comparison method. When both far and near objects are inclined screens, the error is 7%. Orig. art. has: 26 formulas, 1 figure, and 4 tables.

ASSOCIATION: Minskaya GMO (Minsk GMO)

SUBMITTED: 00 ENCL: 00 SUB CODE: ES, OP

NO REF SOV: 006 OTHER: 000

Card 2/2

ACC NR: AT6036496 SOURCE CODE: UR/0000/66/000/000/0062/0063

AUTHOR: Benevolenskaya, T. V.; Boykova, O. I.; [redacted] Mikhalylovskiy, G. P.; Savilov, A. A.

ORG: none

TITLE: Use of dosed physical exercise in diagnosing changes in the functional state of the cardiovascular system [Paper presented at the Conference on Problems of Space Medicine held in Moscow from 24 to 27 May 1966]

SOURCE: Konferentsiya po problemam kosmicheskoy meditsiny, 1966. Problemy kosmicheskoy meditsiny. (Problems of space medicine); materialy konferentsii, Moscow, 1966, 62-63

TOPIC TAGS: space medicine, diagnostic medicine, cardiovascular system, cosmonaut. training, physical exercise, cardiology

ABSTRACT: Exercise tests are valuable for examination of cosmonauts because they uncover latent pathological changes in cardiovascular function. Many of the subjects of this study were unaccustomed to sport or exercise, so it was necessary to demonstrate their adaptability to physical exercise. Physical exercise consisted of a single and double Master test — twenty deep-knee-bends in 30 sec-- and work on a bicycle ergometer. Master' s test is valuable because it permits dosing the exercise depending on the subjects' age and weight and makes evaluation of myocardiac

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function during exercise possible. However, electrocardiograms cannot be recorded in the usual manner during this test. For this reason the supplementary test on the bicycle ergometer was used. The optimum physical exercise of 1000 kg-m per min was performed for 5 min. Tests (160 in all) were administered in the morning after preliminary training the night before. EKG's, phonocardiograms, sphygmograms, and blood pressure readings were taken before and after the test, and at one-minute intervals during the test.

Experimental results showed the following physiological shifts in healthy people: 1) pulse rate increased 100—120% from initial levels, 2) systolic pressure increased to 200 mm, 3) diastolic pressure varied up to 10 mm in either direction, 4) the T-spike of the EKG decreased and subsequently increased, and 5) the ST interval underwent a slight shift. Decreases in the length of the isometric contraction pause, the period of expulsion, and the mechanical system were noted, together with increases in the intrasystolic index and the rate of increase in intraventricular pressure. In addition, the percentage of oxygenation changed slightly. In some subjects there were indications of insufficient cardiac-muscle, nourishment, appearing chiefly in the aftereffect

period: the ST interval shifted, some two-phase or inverted T-spikes were noted, and migration of rhythm occurred.

Tests on the bicycle ergometer also demonstrated the insufficient adaptability of the cardiovascular system to physical exercise: 1) pulse rate increased 200%, 2) diastolic pressure increased 30 mm, 3) a long aftereffect period was noted, and 4) extrasystole occurred. In some subjects the isometric contraction phase increased. The T-spike of the EKG changed slightly.

Inclusion of these tests in the regular examination of aviation personnel and cosmonauts is recommended because of the possibility of dosing exercises and recording a number of electrophysiological parameters during exercise, but also because of the large percentage of pathological cardiovascular changes uncovered in apparently healthy people during work on the ergometer. [W.A. No. 22; ATD Report 66-116]

SUB CODE: 06, 05 / SUBM DATE: 00May66

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001447330002-7"

SAVILOV, A. I.

"Growth and its Variation in the Invertebrate of the White Sea." Thesis for degree of Cand. Biological Sci. Sub 16 Mar 50, Inst of Oceanology, Acad Sci USSR

Summary 71, 4 Sep 52, Dissertations Presented for Degrees in Science and Engineering in Moscow in 1950. From Vechernyaya Moskva.

SAVILOV, A.I.

Growth and its variability in White Sea invertebrates Mytilus edulis, Mya arenaria, Balanus balanoides. Trudy Inst.okean. 7:198-258 '53. (MLRA 7:3)

(White Sea--Mollusks) (Mollusks--White Sea)

SAVILOV, A.I.

Comparison of the size of mussels (Mytilus edulis) of the White and Okhotsk Seas. Trudy Inst.okean. 11:246-257 '54. (MLRA 8:2)
(White Sea--Mussels)(Okhotsk, Sea of--Mussels)

TARASOV, Nikolay Ivanovich; ZENKEVICH, L.A., otvetstvennyy redaktor; SAVILOV, A.I., redaktor izdatel'stva; NOVIKOVA, S.G., tekhnicheskiy redaktor

[Living light of the sea] Zhivoi svet moria. Moskva, Izd-vo Akademii nauk SSSR, 1956. 124 p. (MLRA 9:12)

1. Chlen-korrespondent AN SSSR (for Zenkevich)
(Phosphorescence)

TARASOV, N.I.; NIKITIN, V.N., doktor biologicheskikh nauk, redaktor; SAVILOV, A.I., redaktor; GRAKOVA, Ye.D., tekhnicheskiy redaktor.

[Sea luminescence] Svechenie moria. Moskva, Izd-vo Akademii nauk SSSR, 1956. 202 p. (MLRA 9:5)
(Ocean) (Phosphorescence)

SAVILOV, A.I.

Floating biocoenosis in the Pacific Ocean, materials of the expedition of the Institute of Oceanology of the Academy of Sciences of the U.S.S.R. on "Vitiaz'" to the Pacific Ocean. Priroda 45 no.3:62-68 Mr '56.
(Pacific ocean--Marine fauna) (MLRA 9:7)

SAVILOV, A.I.

Pleiston biocenosis of the Velella lata Chamisso et Eysenhardt, Siphonophora in the Pacific. Dokl. AN SSSR 110 no.3:476-480 S '56. (MLRA 9:12)

1. Institut okeanologii Akademii nauk SSSR. Predstavleno akademikom D.I. Shcherbakovym.
(Pacific Ocean--Siphonophora)

SAVILOV, A. I.

SHLYAMIN, B.A., otvetstvennyy redaktor; SAVILOV, A.I., redaktor izdatel'stva; POLESITSKAYA, S.M., tekhnicheskiy redaktor

[Super-long-range prognoses of the level of the Caspian Sea] Sverkhdolgosrochnye prognozy urovnia Kaspiiskogo moria. Moskva, 1957. 67 p. (MLRA 10:10)

1. Akademiya nauk SSSR. Institut okeanologii.
(Caspian Sea)

SAVILOV, A.I.

Biological appearance of the bottom fauna of the northern Okhotsk Sea. Trudy Inst. okean. 20:88-170 '57. (MIRA 10:12)
(Okhotsk, Sea of--Marine fauna)

SAVILOV, A.I.

Growth and its variability in the White Sea invertebrates Mytilus edulis, Mya arenaria and Balanus balanoides. Pt. 2. Trudy Inst. okean. 23:216-236 '57. (MIRA 11:3)
(White Sea--Cirripedia)

SOV-26-58-3-12/51

AUTHORS: Birshteyn, Ya.A., Professor; ~~Savilov, A.I., Candidate~~ of Biological Sciences; Udintsev, G.B., Candidate of Geographical Sciences

TITLE: Trawling at the Maximum Depth of the World Ocean (Traleniye na maksimal'noy glubine mirovogo okeana)

PERIODICAL: Priroda, 1958, Nr 3, pp 70-71 (USSR)

ABSTRACT: The "Vityaz'" expeditionary vessel of the Institut okeanologii AN SSSR (Institute of Oceanology of the AS USSR did some IGY research of the Marianas Trench on its first cruise. The results obtained showed that the trench has a flat bottom, 1 to 3 km wide, at a depth ranging between 10,000 and 10,900 m between 141°51' and 142°15' west longitude. Maximum depth in this region is 10,960 m. It was found out that the level bottom of the trench becomes bipartite in a westward direction, owing to a small extended upheaval. Research on the "Vityaz'" included trawling for fauna in the deepest part of the trench. On a former trawling expedition in 1953, fauna had been obtained from a depth of 9,950 m in the Kuril-Kamchatka trench. The apparent absence of fauna on the trench bottom is explained by either an extreme rarity of specimens, a total absence in

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this particular area, or an absence due to life-suffocating masses of all kinds of organic sediments or intermittent volcanic action in this region.
There are 4 references, 2 of which are Soviet and 2 English.

ASSOCIATION: Moskovskiy gosudarstvennyy universitet imeni M.V. Lomonosova (Moscow State University imeni M.V. Lomonosov) and Institut okeanologii AN SSSR-Moskva (Institute of Oceanology of the AS USSR-Moscow)

1. Aquatic animals--Pacific Ocean 2. Ocean bottom--Geology
3. Ocean bottom--Sampling

SAVILOV, A. I.

Adaptation for life on silty grounds in ascidians of the genus Chelyosoma [with summary in English]. Zool. zhur. 37 no.2:291-294 F '58. (MIRA 11:3)

1. Institut okeanologii AN SSSR, Moskva.
(Okhotsk, Sea of--Ascidians)

3(9) SOV/20-122-6-16/49

AUTHOR: Savilov, A. I.

TITLE: The Pleuston of the Western Part of the Pacific Ocean (Pleyston zapadnoy chasti Tikhogo Okeana)

PERIODICAL: Doklady Akademii nauk SSSR, 1958, Vol 122, Nr 6, pp 1014-1017 (USSR)

ABSTRACT: The composition of the pleuston was systematically investigated for the first time during the voyage of the expedition ship "Vityaz" in the Pacific (June 28, 1957 to February 25, 1958). The sailing route of the "Vityaz" extended over a considerable part of the ocean west of the Meridian 173° west latitude. The pleuston was collected at 264 points. At all points of the voyage pleuston was found in larger or smaller quantities, and the varieties of shape, quantity, and distribution with respect to age of pleuston animals along the meridional sections were investigated. Among other things, considerable variety with respect to the distribution of Vellela lata was observed. Velella lata exercises an important influence upon the propagation of other animals in the pleuston because it serves as food, as well as a substratum for depositing spawn and ova.

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The Pleuston of the Western Part of the Pacific Ocean

The direction in which these animals drift under the influence of wind depends on the orientation of the sail and on some other features of their bodily structure. Under the influence of winds blowing in the same direction for longer periods, the velellae drift wide apart and accumulate in various climatic zones of the ocean or in different water regions. In this case velellae with differently oriented sails are accompanied by various kinds of other pleuston animals. According to the results obtained by an evaluation of the pleuston material collected, it is possible to distinguish between 5 different fauna groups in the investigated part of the ocean. They differ from one another by the distribution of the pleuston over the predominant forms and by the ecologic forms of the predominating kind, i.e. the Velella lata. These groups are connected with the distribution of the various types of maritime currents and with the main wind directions. The authors then give a detailed report on the distribution of the various fauna groups. From the observations discussed there arises the problem of a biographical classification of the surface of oceans according to different regions characterized by the composition of the pleuston. There are 2

SOV/20-122-6-16/49

The Pleuston of the Western Part of the Pacific Ocean

figures and 2 references.

ASSOCIATION: Institut okeanologii Akademii nauk SSSR
(Institute of Oceanology of the Academy of Sciences, USSR)

PRESENTED: June 3, 1958, by D. I. Shcherbakov, Academician

SUBMITTED: May 31, 1958

Card 3/3

SAVILOV, A. I.

"The Pleiston Biocoenosis of the Pacific".
report to be submitted for the Intl. Oceanographic Cong., New York City,
31 Aug - 11 Sep 1959.

(Inst. of Oceanology, Moscow)

SAVILOV, A.I.

Distribution of ecological forms of Velella lata Ch. and Eys. and Physalia utriculus (la Martiniere) Esch. in the North Pacific. Trudy Inst.okean. 45:223-239 '61. (MIRA 15:2)
(Pacific Ocean--Siphonophora)

SAVILOV, A.I.

Ecological characteristics of benthic invertebrate communities in the Sea of Okhotsk. Trudy Inst.okean. 46:3-84 '61. (MIRA 14:6)
(Okhotsk, Sea of--Benthos) (Marine ecology)

SAVILOV, A.I.

Papers submitted for the 10th Pacfic Science Congress, Honolulu, Hawaii 21 Aug-6 Sep 1961.

MAGIBIMA, M. S., Institute of Geology - "Mesozoic depressions and troughs
of east Asiatic type and their position in the systematics of tectonic
forms" (Section VII.C)
MEIZPO, B. A., Moscow State University, Physical Faculty - "The gamma-ray
spectrometric measurements of artificial radioactivity in upper layers
of the ocean" (Section VII.B.6)
MESTEROV, V. G., Chair of Forestry, The Agricultural Academy imeni K. A.
MESTEROV, V. G., Chair of Forestry, The Agricultural Academy imeni K. A. Timiryazev - "Forest fire research and methods of fire control" (Section V.B)
OSTROUMOVA, T. A., Institute of Oceanology - "Biogeographical and
morphological analysis of reproduction and development of flatfish
in the seas of the northwest Pacific" (Section III.C)
OZMIDOV, R. V., Institute of Oceanology - "Investigation of the horizontal
turbulent exchange in the Pacific Ocean" (Section VII.B)
PARIN, N. V., Institute of Oceanology - "Regularities in the geographical
distribution of flying fishes in the Pacific Ocean" (Section VII.C)
PERGAMENT, M. A., Institute of Geology - "Stratigraphic horizons in the
cretaceous deposits of Kamchatka" (Section VII.C)
PETELIN, V. P., Institute of Oceanology - "The processes of recent sedi-
mentation in the western part of the equatorial zone in the Pacific"
(Section VII.C.1)
PETRUSHEVSKIY, B. A., Institute of Earth Physics imeni O. Yu. Schmidt -
"The seismic geological conditions in the northwestern outlying area
of the Pacific basin" (Section VII.C.2)
PONOMAREVA, L. A., Institute of Oceanology - "Euphausiidae in the
northern part of the Pacific" (Section III.C)
PORTENKO, L. A., Institute of Zoology - "The problem of the Bering land
bridge from the zoological point of view" (Section III.A.8.a)
PUSHCHAROVSKIY, Yu. M., Institute of Geology - "Some specific features
in the tectonics of the north part of the Pacific belt" (Section VII.C)
PYRKIN, Yu. R., Moscow State University, Physical Faculty - "A new deep-sea
device for recording currents ('MGU')" (Section VII.B.5)
RADKEVICH, Ye. A., Institute of Geology - "On the stability and
inheritance of structural elements in the frame of the Pacific Ocean
depression" (Section VII.C)
RASS, T. S., OSTROUMOVA, T. A., and GORBUNOVA, N. N., Institute of
Oceanology - "Geographical regularities in regard to reproduction and
development of mass fishes in the northern part of the Pacific"
(Section III.C)
ROMANKEVICH, Ye. A., Institute of Oceanology - "Organic substance in
bottom sediments in the western part of the Pacific" (Section VII.C.1)
RUDICH, Ye. M., Institute of Earth Physics imeni O. Yu. Schmidt -
"Relations between deep focus earthquakes in the eastern margin of
Asia and large structures of the earth crust" (Section VII.C.2)
RYABCHIKOV, A.M., Moscow State University, Geographical Faculty - "The
structure of natural zonatic in east Asia" (Section VI.C)
RYKUNOV, L. N., Moscow State University, Physical Faculty, Chair of Hard
Crust - "The correlative method for studying microseisms" (Section VII.C.2)
SAYDOVA, Kh. M., Institute of Oceanology - "The distribution of bottom
lime Foraminifera in the northern part of the Pacific and its use for
the reshaping of the paleorelief" (Section VII.C.1)
SAMOYLENKO, V. S., Institute of Oceanology - "Problems concerned with the
theory of formation of the temperature regime in seas and oceans"
(Section VII.A)
SEMINA, G. I., Institute of Oceanology - "Biogeographical zonation of the
Pacific Ocean in regard to phytoplankton" (Section III.A)
SEROVA, M. Ya., Institute of Geology - "Paleogene Formanifera of Kamchatka"
(Section VII.C)
SAVILOV, A.I. SAVILOV, A. I., Institute of Oceanology - "Velella and Physalia in the
pleiston of the Pacific" (Section III.C)
SHEYNMANN, Yu. M., Institute of Earth Physics imeni O. Yu. Schmidt -
"Mechanism of ocean-magmas (?) origin" (Section VII.C.2)
SHOSHIN, A. A., The Central Organization of Leningrad - "The main problems
of human illness geography and their significance for prophylactic
medicine" (Section VII.B.4)
SHUMSKIY, P. A., Institute of Permafrost Studies - "Glaciology of
Antarctica" (Section VII.D.1)
SYSOYEV, N. N., Institute of Oceanology - "Methods for measuring deep
currents in the ocean and some results of their application in the
Pacific Ocean" (Section VII.B.5)

VINOGRADOV, M.Ye.; PARIN, N.V.; SAVILOV, A.I.

Marine biology. Okeanologiia 2 no.3:493-505 '62. (MIRA 15:7)
(Marine biology)

MUKHLENOV, I.P.; TRABER, D.G.; ANOKHIN, V.N.; SAVILOV, D.M.; SHEKUN, B.N.

Synthesis of ammonia in a fluidized catalyst bed. Zhur. prikl. khim. 37 no.2:233-239 F '64. (MIRA 17:9)

1. Leningradskiy tekhnologicheskiy institut imeni Lensoveta i Novomoskovskiy khimicheskiy kombinat.

69905

S/109/60/005/04/020/028
E140/E435

9.4000

AUTHORS: Tychinskiy, V.P., Fedorov, V.G. and Savilov, P.I.

TITLE: Regenerative Amplifier-Converter Using Diodes with Nonlinear Capacitance

PERIODICAL: Radiotekhnika i elektronika, 1960, Vol 5, Nr 4, pp 677-679 (USSR)

ABSTRACT: A regenerative amplifier-converter using the nonlinear capacitance of a semiconductor diode, based on the Manley-Rowe theorem (Ref 1), has been built and studied. The gain and noise factor at frequencies between 200 and 1000 Mcs were measured. At 750 Mcs the gain is of the order of 20 to 35 dB practically constant for input power levels of 10^{-6} to 10^{-5} W. The noise factor was 1.25 to 2.0 dB. The conversion gain did not exceed 3 to 5 dB. Acknowledgements are expressed to Yu.T.Derkach for his assistance in evaluating the results. There are 2 figures and 4 English references.

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SUBMITTED: August 17, 1959

Card 1/1

TSETSURA, I.A.;PAVLOV, B.A.;SAVILOV, T.R.;FOMIN, V.A.

Proximity effect of electric transmission lines on the stability of continuous type automatic cab signaling devices. Avtom. telem. i sviaz' 3 no.11:31-33 N '59 (MIRA 13:3)

1. Nachal'nik laboratorii signalizatsii i svyazi Krasnoyarskoy dorogi (for TSetsura). 2. Starshiye inzhenezy laboratoriie signalizatsii i svyazi Krasnoyarskoy dorogi (for all except TSetsura).
(Railroads--Signaling) (Shielding (Electricity))

SAVILOV, V.V.; GORNAKOV, S.I.

Coal crushers for small and medium capacity boiler installations.
Leg.prom. 14 no.5:45-47 My '54. (MLRA 7:6)

1. Glavnyy mekhanik KIP (for Savilov). 2. Glavnyy energetik KIP (for Gornakov)
(Crushing machinery)

BORISOV, V.T.; GOLIKOV, V.M.; SAVILOV, Ye.S.; SHCHERBEDINSKIY, G.V.

Studying the diffusion of carbon in iron. Probl. metalloved. i fiz. met. no.8:305-310 '64. (MIRA 18:7)

SAVIMAA, A.

Raising young geese or freen forage. p. 24

SOTSILIKTLIK POLLUMJANDUS. POLLUMJANDUS MINISTEERIUM.
Tallin, Hungary. No. 1, 1958

Monthly List of East European Accessions (EEAI) LC, Vol. 8, no. 11
November 1959.

Uncl.

SAVIN, A.

85-58-5-21/45

AUTHOR: Romanyuk, V., Honorary Master of Sports, and Savin, A., Master of Sports

TITLE: Delayed Group Jumping from the Stratosphere (Gruppovyye zatyazhnyye pryzhki iz stratosfery)

PERIODICAL: Kryl'ya rodiny, 1958, Nr 6, pp 17-19 (USSR)

ABSTRACT: The authors, both parachutists, discuss delayed group jumping from high altitudes, a quasi-military type of sport, which acquired particular importance after Czech parachutists surpassed the Soviet record in the spring of 1957. Intensified preparations for the next international contest included the choice of the Sokol multi-seater turbojet plane, capable of reaching an altitude of 15,000 to 16,000 meters. Several test flights were made and particular attention was given to clothing outfits and special equipment. The customary jump helmet was discarded in favor of the "germoshlem" (hermetic helmet). Clothing included thin wool or silk jersey underwear worn under a pressure suit, over which the usual flying outfit was worn. Special equipment included a battery to heat the glass of the hermetic helmet during the free fall, a kit attached to the parachutist harness containing the

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Delayed Group Jumping from the Stratosphere

instrument for recording the jump, and an oxygen outfit. The total weight of parachute, clothing and special equipment was 50 kg. per person, of which the most important items were the close-fitting pressure suit and the hermetic helmet. Five test flights were made in all from 5,000 m. to 16,000 m. The first 5,000 m. flight was made without an oxygen outfit to adapt the organism to higher altitudes; 30 minutes were spent at 5,000 m. and the descent made at a speed of 55 to 65 m./sec. The second flight at 12,000 m. was made in pressure clothing and full equipment, except for spare parachutes. Instead of the hermetic helmet the parachutists used ordinary oxygen masks, which some claimed relieved pressure on the ear drums during the free fall by making it possible to hold the nose, and also permitted parachutists to wipe sweat off the face, etc. Altitudes were gradually increased to 16,000 m. The first jumps were made from an altitude of 1,500 m., the free fall lasting 20 seconds. In subsequent flights parachutists bailed out in full equipment at 4,000 m., with a free fall of 700 m. These flights established that the hermetic helmet required some modification. The modified equipment was then accepted since it made breathing easier and would protect the face from cold air currents in free falls. The entire group participated in the third training jump; the plane climbed to its maximum altitude, then dropped to 2,000 m., where jumps were made. Hermetic helmets were worn, and the glass in these did not fog over. Control

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of the body in the pressure suit was much more difficult; movements were impeded and the parachutist's hands almost immobilized. This appeared to be due to the asymmetry of the clothing outfit. The third jump confirmed the advantages of the hermetic helmet, leaving open the problem as to whether it should be kept on until landing or removed once the parachute was opened. Some of the parachutists maintained that the helmet prevented proper gaging of distance to the ground. It was finally decided to remove the glass immediately upon opening the parachute, since if the parachutist landed on his side, the air hose might become blocked and stop the oxygen flow. Hermetic helmets were worn on all subsequent flights. On 20 August 1957, a record delayed jump was made from an altitude of 15,383 m. by honorary Master of Sports N. Nikitin; on 21 August, the group, consisting of N. P. Zhukov, A. Vanyarkho, V. Petrenko, Ye. Andreyev, P. Ishchenko, and V. Romanyuk jumped from an altitude of 14,811 m., with a free fall of 14,045 m., setting a new All-Union and world record. Parachutes remained unopened for 4 minutes. The entire group landed within a radius of 600 to 700 m. from the designated area marked by a white cross measuring 5 x 80 m. The jump reaffirmed that maintenance of body control was much more difficult in a pressure outfit and that when parachutists succeeded in attaining the proper balance after bailing out,

they were not always able to maintain it. It further established that the helmet made the parachutist underestimate the distance from the ground, because the sensation of speed in falling was felt only at 1,500 to 2,000 m. A special sound signaling device, timed for an altitude of 1,500 m., was therefore used to indicate the approach to the ground. The first group delayed night jump was made from an altitude of 14,382 m., on 27 August [1957] by N. Nikitin, G. Nikolayev, Ye. Andreyev, P. Ishchenko, and the 2 authors. Orientation was complicated in the dark; two signal lights and a red, green and white flashlight were used to signal the place of landing. The night jump established that stronger fleshlights were needed with directional lights. The free fall lasted about 4 minutes and covered 13,543 m. The group landed within a radius of 300 to 400 m. from the target, in one case within 100 m. Other personalities mentioned included B. Bobrikov, N. Fedorov, A. Shishkov, V. Zhitnik. There are 2 photographs showing parachutists P. Ishchenko and N. P. Zhukov in pressure outfits.

1. Parachute jumping-USSR

SAVIN, A.; TARASOV, V. (Orekhovo-Zuyevo); MISHIN, N.

Creativeness is the spirit of trade-union work. Sov.profsoiuzy 19 no.2:15-17 Ja '63. (MIRA 16:2)

1. Predsedatel' tsekhovogo komiteta Astrakhanskogo sudostroitel'nogo zavoda, chlen oblastnogo soveta professional'nykh soyuzov (for Savin). 2. Neshtatnyy instruktor Moskovskogo oblastnogo komiteta professional'nogo soyuza rabochikh tekstil'noy i legkoy promyshlennosti (for Tarasov). 3. Predsedatel' Moskovskogo oblastnogo komiteta professional'nogo soyuza rabochikh tekstil'noy i legkoy promyshlennosti (for Mishin).
(Trade unions--Officers)

SAVIN, A A

AID P - 3226

Subject : USSR/Electricity

Card 1/1 Pub. 29 - 11/30

Author : Savin, A. A., Electrician

Title : Automatic device regulating the operation of water-heating boiler with gas fuel

Periodical : Energetik, 8, 12-13, Ag 1955

Abstract : The author describes the arrangement which automatically regulates the temperature of heated water. One schematic drawing.

Institution : None

Submitted : No date

3477h
S/052/62/007/001/004/005
C111/C444

16.6100

AUTHORS: Savin, A. A; Chistyakov, V. P.

TITLE: Some limit theorems for branching processes with a few types of particles

PERIODICAL: Teoriya veroyatnostey i yeye primeneniye, v. 7, no. 1, 1962, 95-104

TEXT: Let a particle of the type T_k change in the time $\Delta t \to 0$ with the probability $\delta_k^{\omega} + p_k^{\omega} \Delta t + 0(\Delta t)$, where $\delta_k^{\omega} = 1$ for $\omega_k = 1$, $\omega_i = 0$ $(i \neq k)$ and $\delta_k^{\omega} = 0$ in other cases, into the set of particles $\omega = (\omega_1, \ldots, \omega_n)$ of the types $T_1, \ldots, T_n$. Let $\mu_{kj}(t)$ be the number of the particles of the type T_j which in the time t originate from a particle of the type T_k. Let $f_k(x_1, \ldots, x_n) = \sum_{\omega} p_k^{\omega} x_1^{\omega_1} \ldots x_n^{\omega_n}$ and let exist

$$a_{ij} = \left.\frac{\partial f_i}{\partial x_j}\right|_{x=1}, \quad b_{ij}^{(k)} = \left.\frac{\partial^2 f_k}{\partial x_i \partial x_j}\right|_{x=1}, \quad c_{ijl}^{(k)} = \left.\frac{\partial^3 f_k}{\partial x_i \partial x_j \partial x_l}\right|_{x=1}.$$

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S/052/62/007/001/004/005
C111/C444

Some limit theorems for . . .

The class of the types and the degree of the class be defined as in (Ref. 1: B. A. Sevast'yanov, Teoriya vetvyashchikhsya sluchaynykh protsessov [Theory of the branching random processes], Uspekhi matem. nauk, VI, 6 (1951), 47-99). Let λ be the characteristic number of $\| a_{ij} \|$ with the largest real part.

Considered is a class sequence by which with positive probability one can obtain from particles belonging to the class with maximal degree r, particles of the class with degree 0. This class sequence is corresponding to a sequence of irreducible matrices with elements a_{ij}. Let k of these matrices have the characteristic number 0. Let $p = \max k$ with respect to all class sequences which lead from the class with degree r into the classes with degree 0. Let

$$Q_k(t) = P\left\{\sum_{j=1}^{n} \mu_{kj}(t) > \right\} .$$

Theorem 1: Let in a degenerated branching process with $\lambda = 0$ the a_{ij} and $b_{ij}^{(k)}$ (i,j,k = 1,...,n) are finite, then for the types T_k,

Card 2/4

Some limit theorem for . . .

belonging to the class with degree r, for $t \to \infty$ there holds

$$Q_k(t) \sim q_k t^{-2^{1-p}}$$

where the constants $q_k > 0$ are depending on a_{ij}, $b_{ij}^{(k)}$.

Theorem 2: If in a degenerated process with three types of particles

1.) the types T_1, T_2, T_3 belong to the classes with degree 2, 1, 0

2.) $b_{ij}^{(k)}$ $(i,j,k = 1,2,3$, $c_{333}^{(3)}$ exist

3.) $a_{11} < 0$, $a_{22} \leq 0$, $a_{33} = 0$, then for $t \to \infty$ the distributions

$$P\left\{ \frac{\mu_{k1}}{t} < y_1, \frac{\mu_{k2}}{t} < y_2, \frac{2\mu_{k3}}{b_{33}^{(3)} t} < y_3 \;\middle|\; \sum_{j=1}^{3} \mu_{kj}(t) > 0 \right\} \quad ,k = 1,2,3$$

converge to the distribution

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S/052/62/007/001/004/005
C111/C444

Some limit theorem for . . .

$$S(y_3) = \begin{cases} \frac{1}{2^{p-1}} \int_0^{y_3} e^{-z}\, {}_1F_1\,(1-2^{1-p},\ 2, z)\,dz, & \text{for } y_3 \geq 0 \\ 0 & \text{for } y_3 < 0 \end{cases}$$

where

$${}_1F_1(\alpha, \gamma, z) = 1 + \frac{\alpha}{\gamma}\frac{z}{1!} + \frac{\alpha(\alpha+1)z^2}{\gamma(\gamma+1)2!} + \ldots$$

$p \geq 1$ being the number of the zeros in the main diagonal of the matrix Φ.

The author mentions I. M. Samusenko.
There are 7 Soviet-bloc references and 1 non-Soviet-bloc reference.

SUBMITTED: September 9, 1960

Card 4/4

SAVIN, A.A.

Comments on the chapter, "Blood and lymph. The organs of blood and lymph circulation", in A.M.Breitburg's monograph, "The physiology of nutrition". Vop.pit 21 no.4:94 Jl-Ag '62.
(MIRA 15:12)

(BLOOD—TRANSFUSION)

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ACC NR: AT6008561 SOURCE CODE: UR/0000/65/000/000/0081/0088

44
B+1

AUTHOR: Savin, A. A.

ORG: none

TITLE: Application of information theory to simple image identification problems

SOURCE: AN SSSR. Institut nauchnoy informatsii. Chitayushchiye ustroystva (Reading devices). Moscow, VINITI, 1965, 81-88

TOPIC TAGS: information theory, reading machine, character reading equipment

ABSTRACT: In cases where the inputs to the automatic reading device 16 consist of some arbitrary objects of external media which are divided into different groups, an automatic device transmits this information to the observing mechanism. This mechanism estimates the result by comparing the unknown elements with its own natural characteristics. Because the result of that procedure may not be sufficiently accurate, information theory is introduced, and the input to the automatic reading device is treated as a given probability. From the analytical computations statistical relation was derived between a multidimensional random variable and a characteristic representation. With the aid of these characteristics it is possible to treat printed symbols as simple geometric elements. Orig. art. has: 1 figure.

SUB CODE: 09/ SUBM DATE: 09Sep65/ OTH REF: 002

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SAVIN, A. G.,

"Towards a Steep Rise in Farm Production," Sotsialisticheskoye stroitel'stvo na Urale: sbornik statey (Socialist Construction in the Ural Industrial Area; Collection of Articles) [Sverdlovsk] Sverdlovskoye knizhnoye izd-vo, 1957. 345 p.

Ed. (front of book): ZUYKOV, V. N., Candidate of Historical Sciences; Ed. (Back of book); GETLING, Yu.; Tech. Ed.: PAL'MINA, N.

PURPOSE: This collection of articles is intended for the general reader.

COVERAGE: The collection contains reports on the economic growth of the Ural Industrial Area, including the development of farming. Particular attention is given to the role played by this region during the 2nd World War.

S/181/61/003/001/038/042
B102/B204

AUTHORS: Antuf'yev, V. V., Votinov, M. P., Kuvshinskiy, Ye. V., and Savin, A. G.

TITLE: Investigation of the ageing processes of titanium-containing ceramics by means of electron paramagnetic resonance

PERIODICAL: Fizika tverdogo tela, v. 3, no. 1, 1961, 286-288

TEXT: It was the purpose of the present paper to study the electrical ageing of titanium-containing ceramics by means of electron paramagnetic resonance (epr). The investigations were carried out with capacitor ceramics (87% TiO_2, 5% ZrO_2, 2% $BaCO_3$, 6% Al_2O_3, and 6% SiO_2 paste, burned in the usual manner); the specimens had the shape of tubes (28 mm long, wall thickness 1 mm) and were partly electrically aged (180°C, 700 v constant voltage). The aged specimens were denoted by K_a, and those let in their original shape, by K_0. For the investigations, an epr radio-spectrometer with h-f modulation (1 Mc/sec) of the magnetic field was used; the epr signal was recorded by a recorder in the form of the first

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derivative of the absorption curve. In the case of a fixed frequency of the shf generator of 9300 Mc/sec, the field could be varied between 1000 and 4000 gauss. At 300°K, no difference could be found between the epr spectra of K_o and K_a; in both cases only 1 weak broad line (with $g \simeq 4.14$) was found. Therefore, all further experiments were carried out at 77°K. At this temperature, K_o showed a complex spectrum between 1000 and 4000 gauss; the spectrum of K_a was similar, but the lines with $g \simeq 1.97$ and 1.93 were 1.5 times more intense. This part of the spectrum was more accurately investigated. During ageing, the concentration of paramagnetic defects increased, and the electrical conductivity was 100-1000 times increased. An attempt is now made to find out why, in spite of this considerable increase of conductivity, the intensity of epr signals increased only 1.5 times. The opinion is widespread that ageing of titanium ceramics is related to a reduction of titanium; thus, K_o ceramics, which had been chemically reduced in different ways, were investigated. The degree of reduction was determined from the time for which the specimens had been heated in CO at 900°C. After having been heated for 10 minutes in CO (K_o-10), K_o had an epr spectrum which was

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exactly the same as that of the original K_0. With further reduction, intensity and width of the line with $g \simeq 1.93$ increased, the line with $g \simeq 1.97$ remained unchanged in contrast to the effect produced by electric ageing. After 60 minutes of reduction (K_0-60) the line with $g \simeq 1.93$ was so broad that it overlapped that with $g \simeq 1.97$. The concentration of paramagnetic defects in K_0-60 was higher by 3 orders of magnitude than in K_0. Thus, in the case of chemical reduction, only the concentration of 1 type of paramagnetic defects is increased, in electric ageing, however, the concentration of 2. In the pure components of the ceramics, no epr signal was found, not even (TiO_2) in the case of irradiation with 7.10^6r γ-radiation from Co^{60}. The authors thank V. Ya. Kunin for his collaboration, and I. D. Fridberg and K. Ye. Lisker for placing the material at their disposal. There are 1 figure and 3 Soviet-bloc references.

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Investigation of the ageing processes...

ASSOCIATION: Politekhnicheskiy institut im. M. I. Kalinina (Polytechnic Institute imeni M. I. Kalinin); Institut vysokomolekulyarnykh soyedineniy AN SSSR Leningrad (Institute of High-molecular Compounds, AS USSR, Leningrad)

SUBMITTED: July 21, 1960

L 62478-65 EWG(j)/EWT(m)/EPF(c)/EPF(n)-2/EWP(j)/T/EWA(h)/EWA(1) GG/RM

ACCESSION NR: AP5020972 UR/0190/65/007/008/1427/1429
678.01:53

AUTHOR: Savin, A. G.; Vaysberg, S. E.; Karpov, V. L.; Tikhomirova, N. S.

TITLE: Gas diffusion in polymers subjected to ionizing radiation

SOURCE: Vysokomolekulyarnyye soyedineniya, v. 7, no. 8, 1965, 1427-1429

TOPIC TAGS: gas diffusion, polymer, polyethylene, ionizing radiation

ABSTRACT: A study has shown that gas diffusion through polymers is not accelerated by irradiation. This finding is in contrast to the results of Tikhomirova, Malinskiy, and Karpov (Vysokomolekulyarnyye soyedineniya, 2, 1960, 1349) which are attributed to trivial effects in the absence of a control experiment. The study involved the diffusion of argon, helium, and nitrogen in polyethylene which was being irradiated with ionizing radiation (γ-rays from a Co^{60} source or 300-kev electrons) at 0 and 17—19C at dose rates from 400 to 10,000 rad/sec. Orig. art. has: 1 table and 3 figures. [SM]

ASSOCIATION: Fiziko-khimicheskiy institut im. L. Ya. Karpova (Physicochemical Institute)

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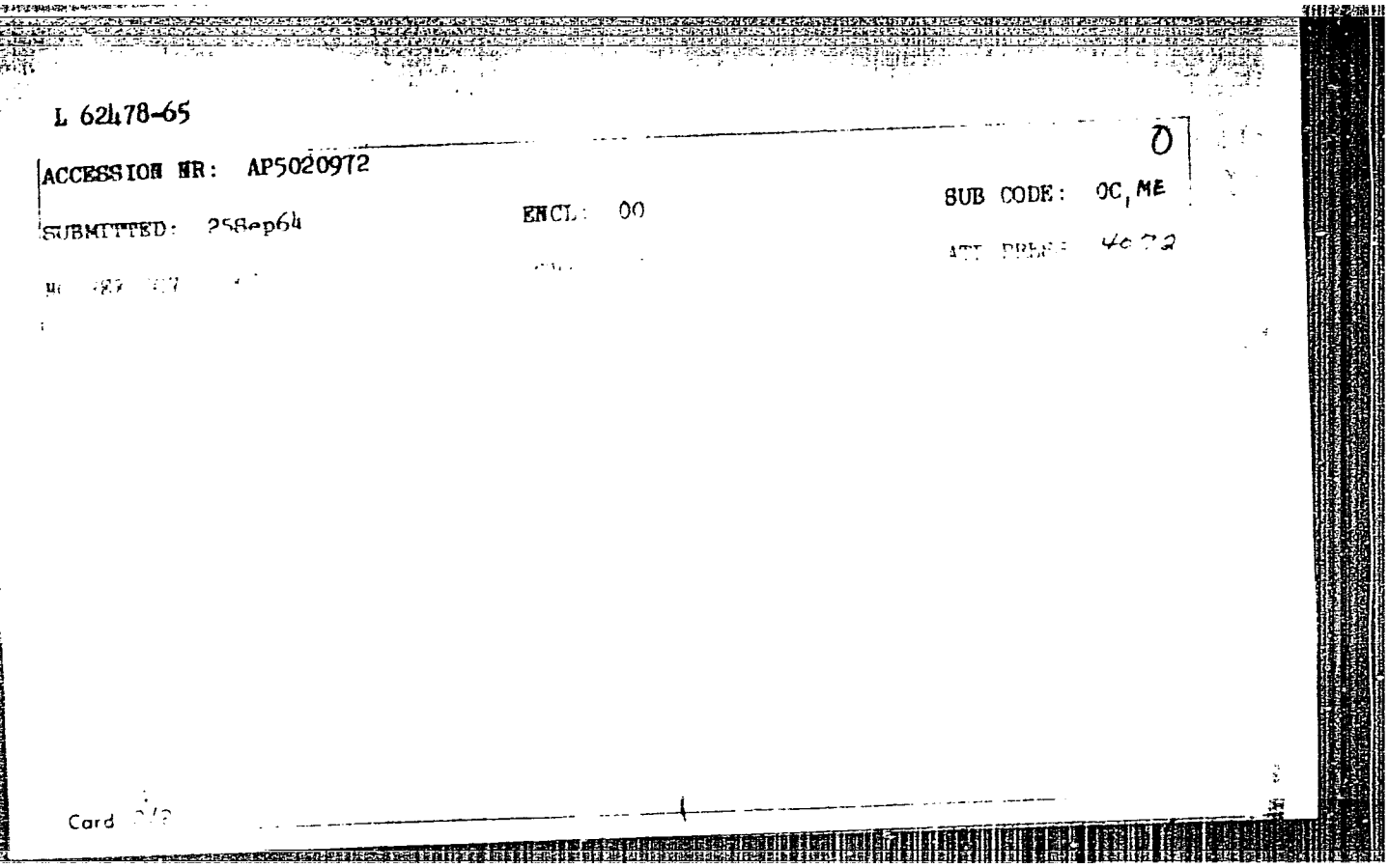

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ACCESSION NR: AP5020972

SUBMITTED: 25Sep64 ENCL: 00 SUB CODE: OC, ME

Card 1/2

KIORESKC, B.V.; GUSEV, V.F.; TURUBINER, A.L.; MOLOTKOV, G.A.; SAVIN, A.I.

Automatization of open-hearth furnaces at the Zaporozhstal' Plant.
Stal' 16 no.8:689-697 Ag '56. (MLRA 9:10)

1.Zavod "Zaporozhstal'."
(Zaporozh'ye--Open-hearth furnaces) (Automatic control)

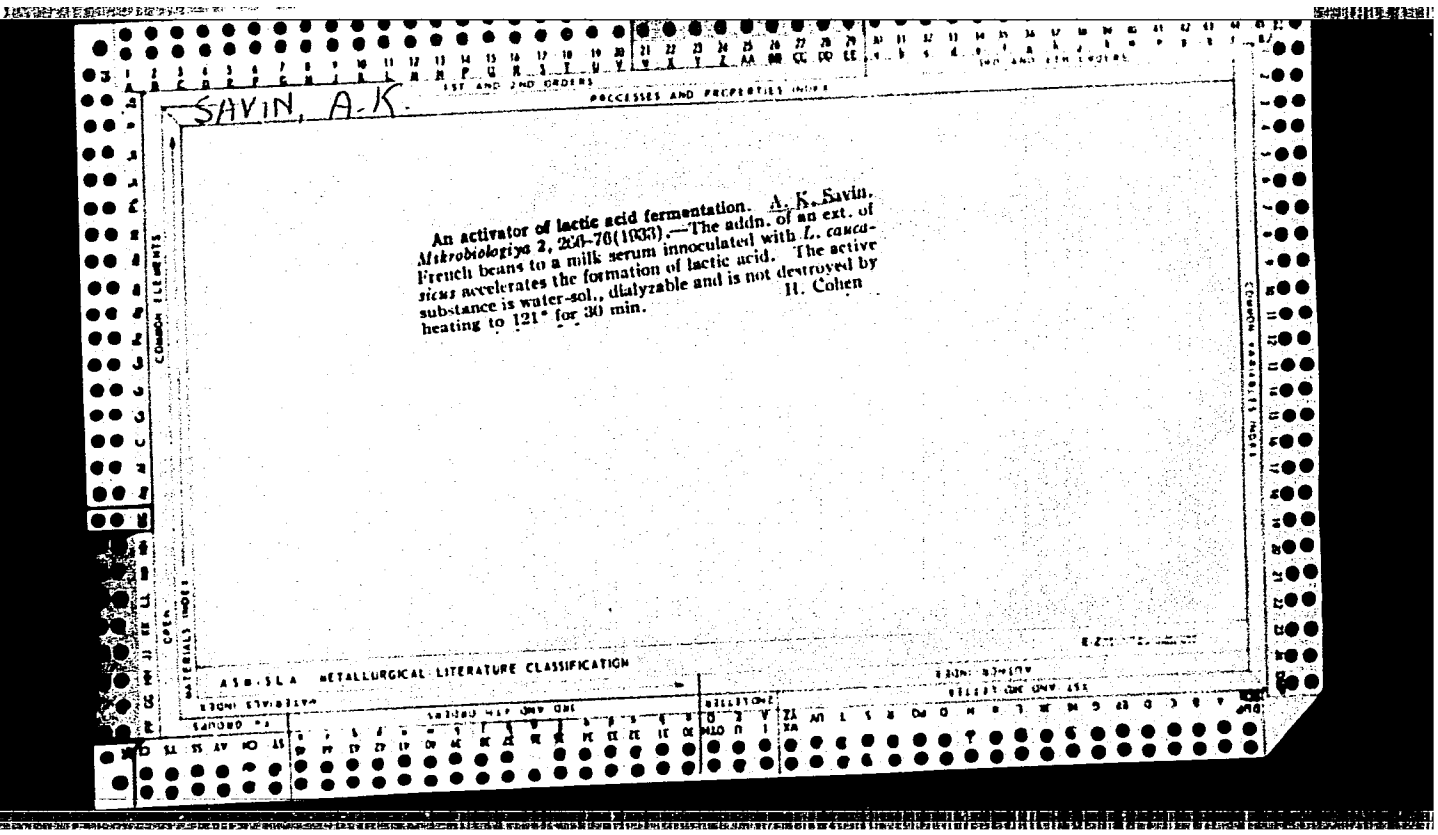
TURUBINER, A.L.; SAVIN, A.I.

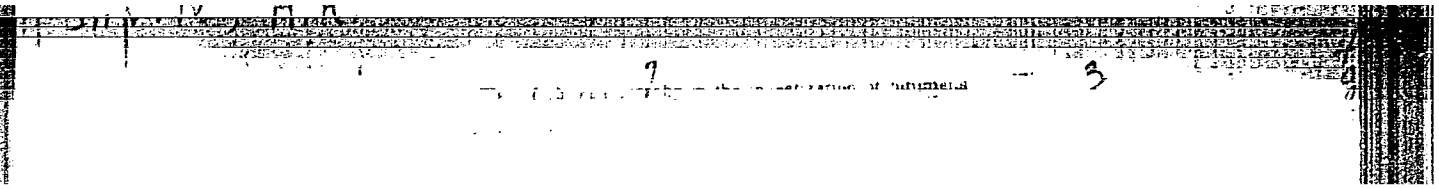
Efficient performance schedule of reversal devices in open-hearth furnaces fired with cold natural gas. Metallurg 7 no.5:18-20 My '62. (MIRA 15:5)

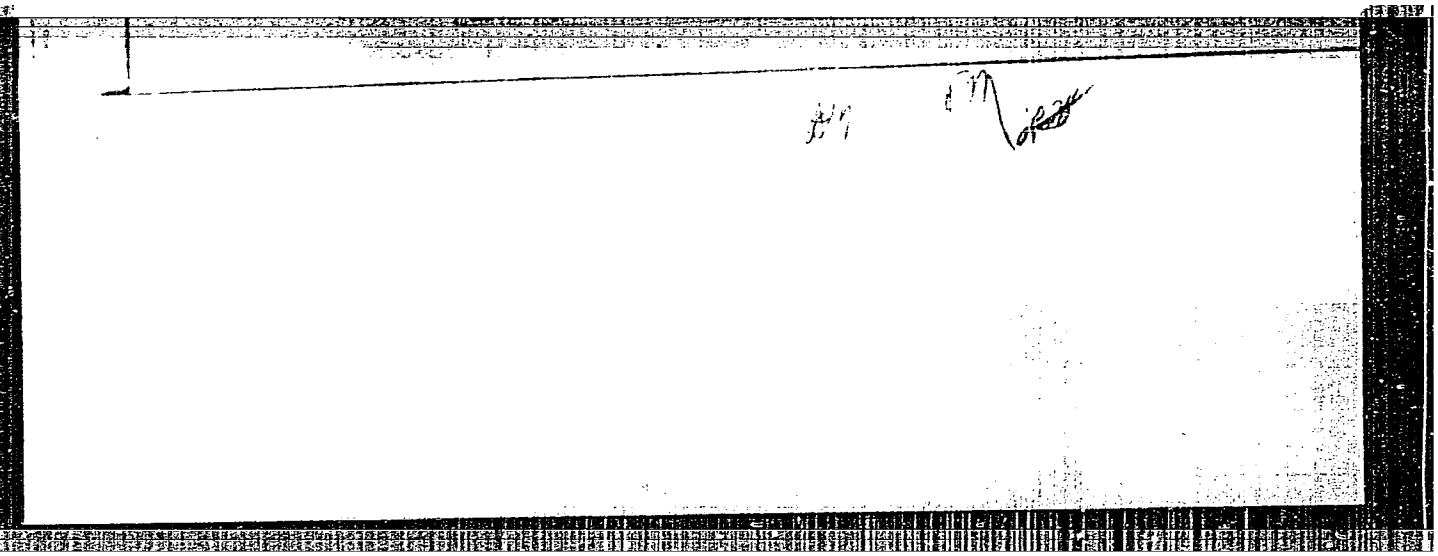
1. Zaporozhskiy filial Instituta avtomatiki.
(Open-hearth furnaces--Equipment and supplies)

TURUBINER, A.L.; GURSKIY, G.L.; SAVIN, A.I.; TEREKHOV, A.I.; GUSEV, V.F.; LEBEDEVA, V.F.

Influence of thermal conditions on the self-carburation and radiation of the natural gas flame. Stal' 24 no.11:985-989 N '64. (MIRA 18:1)







22(1) SOV/3-59-4-15/42

AUTHOR: Savin, A.K., Docent

TITLE: The Specialists in Chemistry Should Be Trained to Cope With New Goals

PERIODICAL: Vestnik vysshey shkoly, 1959, Nr 4, pp 38-40 (USSR)

ABSTRACT: The numerous articles which have appeared in this periodical on chemical education prove the interest vuz workers have for these problems. Their authors believe that the present program on chemistry for "non-chemical" vuzes does not ensure a high standard of training engineers in chemistry, and should be altered. However, it should not be an alternate changing of the program, but a radical reorganization, i.e. a change of the very principles of structure of the course. The author disagrees on this point with Docent M.B. Radvinskiy. The task facing the school is to teach the student to be familiar with problems of chemistry. For this purpose it is necessary that the course in general chemistry enable the student to assimilate the basic laws determining the properties of substances, and the character and direction of the chemical

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SAVIN, A.M., referent

Hydraulic scale removal in United States metallurgical plants [from "Iron and Steel Engineer" no.12, 1958]. Metallurg 5 no.8:37-38 Ag '60. (MIRA 13:7)
(United States--Metal cleaning)

VOLIK, Yu.P.; BOYTSOV, V.V.; SAVIN, A.M.

Stamping automobile crosspiece forgings in sectional dies.
Avt.prom. 28 no.4:39-42 Ap '62. (MIRA 15:4)

1. Nauchno-issledovatel'skiy tekhnologicheskiy institut avtomobil'noy promyshlennosti.
(Dies (Metalworking))

GEORGOBIANI, A.N.; MATINYAN, Ye.G.; SAVIN, A.N.

Low-voltage electroluminescence of ZnS. Opt. i spektr. 18 no.2:347-349 F '65. (MIRA 18:4)